

User's Manual



MultiSync LCD8205

MultiSync LCD8205-P

Index

Declaration of conformity	English-1
Important Information	English-2
Warning, Caution	English-2
Declaration	English-2
Safety Precautions, Maintenance & Recommended Use	English-3
Contents	English-4
Installation	English-5
Parts Name and Functions	English-7
Control Panel	English-7
Terminal Panel	English-8
Wireless Remote Control	English-9
Operating Range for the Remote Control	English-9
Handling the remote control	English-9
Setup.....	English-10
Connections	English-12
Connecting a Personal Computer	English-12
Connect the LCD Monitor to a Personal Computer	English-12
Connecting a DVD Player with component out	English-13
Connect the LCD Monitor to a DVD Player	English-13
Connecting a DVD Player with HDMI out	English-14
Connect the LCD Monitor to a DVD Player	English-14
Connecting to a Stereo Amplifier	English-14
Basic Operation	English-15
Power ON and OFF Modes	English-15
Power Indicator	English-16
Using Power Management	English-16
Picture Size	English-16
OSD (On-Screen-Display) Controls	English-17
Picture	English-18
Sound	English-19
Setup	English-19
Controlling the LCD monitor via RS-232C Remote Control	English-21
Features	English-22
Troubleshooting	English-23
Specifications	English-24
Pin Assignment	English-25
Manufacturer's Recycling and Energy Information	English-26

Declaration of conformity

For USA

FCC Information

1. Use the attached specified cables with the MultiSync LCD8205 (L828N0)/MultiSync LCD8205-P (L828N0) color display so as not to interfere with radio and television reception.
 - (1) Please use the supplied power cord or equivalent to ensure FCC compliance.
 - (2) Please use the supplied shielded video signal cable.Use of other cables and adapters may cause interference with radio and television reception.
2. This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

For Canada

Canadian Department of Communications Compliance Statement

DOC: This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

C-UL: Bears the C-UL Mark and is in compliance with Canadian Safety Regulations according to CAN/CSA C22.2 No. 60950-1.

Windows is a registered trademark of Microsoft Corporation. NEC is a registered trademark of NEC Corporation. OmniColor is a registered trademark of NEC Display Solutions Europe GmbH in the countries of EU and Switzerland. All other brands and product names are trademarks or registered trademarks of their respective owners.



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Important Information



WARNING



TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.

REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



CAUTION



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

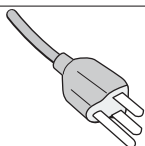
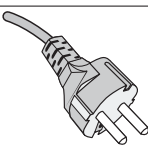
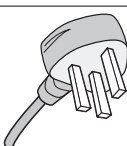
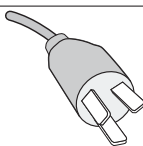
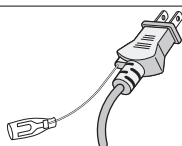


This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

CAUTION: Please use the power cord provided with this display in accordance with the table below. If a power cord is not supplied with this equipment, please contact your supplier. For all other cases, please use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standard of your particular country.

Plug Type	North America	European Continental	U.K.	Chinese	Japanese
Plug Shape					
Region	U.S.A./Canada	EU (except U.K.)	U.K.	China	Japan
Voltage	120*	230	230	220	100

*When operating the MultiSync LCD8205/MultiSync LCD8205-P monitor with its AC 125-240V power supply, use a power supply cord that matches the power supply voltage of the AC power outlet being used.

NOTE: This product can only be serviced in the country where it was purchased.

Declaration

Declaration of the Manufacturer

We hereby certify that the color monitor MultiSync LCD8205 (L828N0)/MultiSync LCD8205-P (L828N0) is in compliance with

Council Directive 2006/95/EC:
– EN 60950-1

Council Directive 2004/108/EC:
– EN 55022
– EN 61000-3-2
– EN 61000-3-3
– EN 55024

and marked with



NEC Display Solutions, Ltd.
4-13-23, Shibaura,
Minato-Ku
Tokyo 108-0023, Japan

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Safety Precautions, Maintenance & Recommended Use

FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE MULTI-FUNCTION MONITOR:

- **DO NOT OPEN THE MONITOR.** There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- The power supply cord you use must have been approved by and comply with the safety standards of your country. (Type H05VV-F 3G 1mm² should be used in Europe)
- In UK, use a BS-approved power cord with molded plug having a black (13A) fuse installed for use with this monitor.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The lamps in this product contain mercury. Please dispose according to state, local or federal law.
- Do not bend, crimp or otherwise damage the power cord.
- If glass is broken, handle with care.
- Do not cover vent on monitor.
- Do not use monitor in high temperature, humid, dusty, or oily areas.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.
- Allow adequate ventilation around the monitor, so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of the monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet, which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.
- Please clean the holes of back cabinet to reject dirt and dust at least once a year because of set reliability.
- If using the cooling fan continuously, it's recommended to wipe holes a minimum of once a month.
- Do not touch LCD panel surface while transporting, mounting and setting. Applying pressure on the LCD panel can cause serious damage.

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.

Recommended Use

- For optimum performance, allow 20 minutes for warm-up.
- Rest your eyes periodically by focusing on an object at least 5 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections.
- Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness, contrast and sharpness controls to enhance readability.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after image effects).
- Get regular eye checkups.

Ergonomics

To realize the maximum ergonomic benefits, we recommend the following:

- Use the preset Size and Position controls with standard signals.
- Use the preset Color Setting.
- Use non-interlaced signals.
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue due to insufficient contrast.

Cleaning the LCD Panel

- When the liquid crystal panel is stained with dust or dirt, please wipe with soft cloth gently.
- Please do not rub the LCD panel with hard material.
- Please do not apply pressure to the LCD surface.
- Please do not use OA cleaner it will cause deterioration or discolor on the LCD surface.

Cleaning the Cabinet

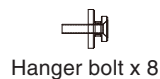
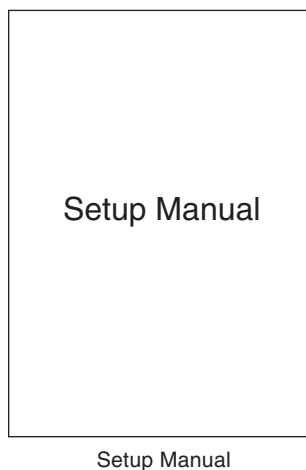
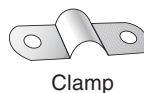
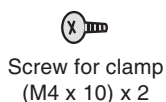
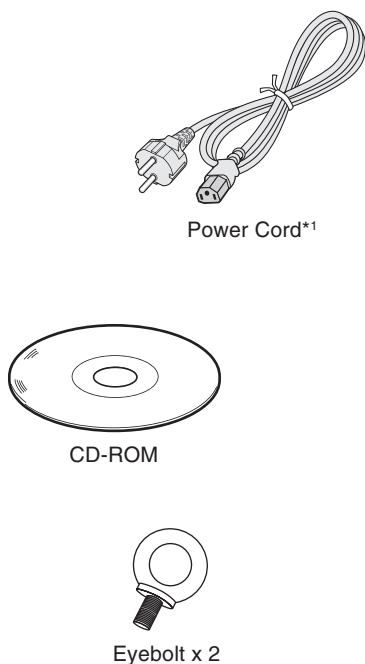
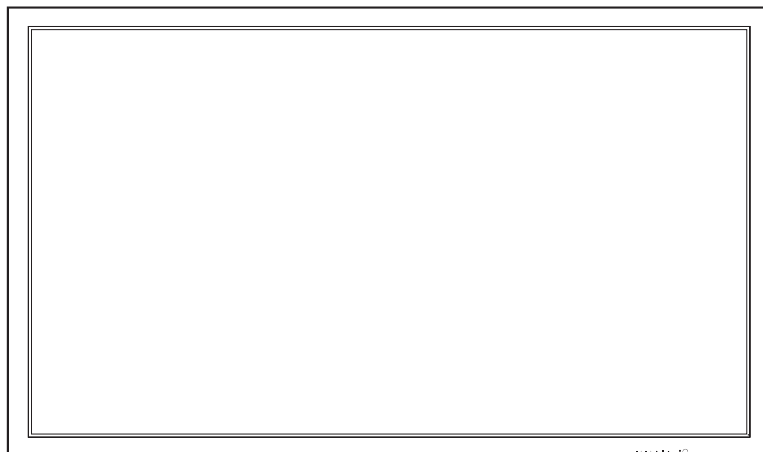
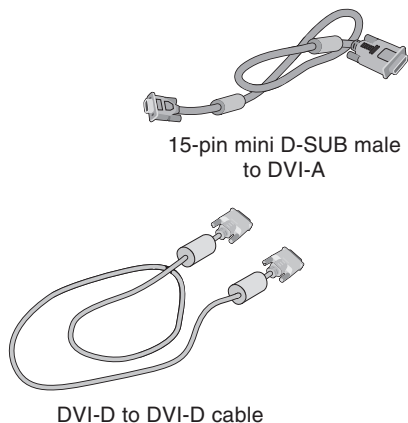
- Unplug the power supply
- Gently wipe the cabinet with a soft cloth
- To clean the cabinet, dampen the cloth with a neutral detergent and water, wipe the cabinet and follow with a dry cloth.

NOTE: The surface of the cabinet is composed of many types of plastic. DO NOT clean with benzene thinner, alkaline detergent, alcoholic system detergent, glass cleaner, wax, polish cleaner, soap powder, or insecticide. Rubber or vinyl should not be in contact with the cabinet for an extended period of time. These types of fluids and materials can cause the paint to deteriorate, crack or peel.

Contents

Your new MultiSync LCD monitor box* should contain the following:

- LCD monitor
- Power Cord*¹
- Video Signal Cable
- Setup Manual
- Wireless Remote Control and AAA Batteries
- Clamp
- Screw for clamp (M4 x 10) x 2
- CD-ROM
- Eyebolt x 2
- Washer x 2
- Hanger bolt x 8



- *¹ Type and number of power cords included will depend on the where the LCD monitor is to be shipped. When more than one power cord is included, please use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standard of your particular country.
- * Install the stands at the time of unpacking if the display will be used with the stand.
- * Remember to save your original box and packing material to transport or ship the monitor.

Installation

This device cannot be used or installed without the Tabletop Stand or other mounting accessory for support. For proper installation it is strongly recommended to use a trained, NEC authorized service person. Failure to follow NEC standard mounting procedures could result in damage to the equipment or injury to the user or installer. Product warranty does not cover damage caused by improper installation. Failure to follow these recommendations could result in voiding the warranty.

Mounting

DO NOT mount the monitor yourself. Please ask dealer. For proper installation it is strongly recommended to use a trained, qualified technician. Please inspect the location where the unit is to be mounted. Mounting on wall or ceiling is the customer's responsibility. Not all walls or ceilings are capable of supporting the weight of the unit. Product warranty does not cover damage caused by improper installation, remodelling, or natural disasters. Failure to comply with these recommendations could result in voiding the warranty.

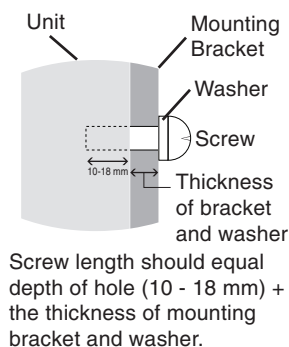
DO NOT block ventilated openings with mounting accessories or other accessories.

For NEC Qualified Personnel:

To insure safe installation, use two or more brackets to mount the unit. Mount the unit to at least two points on the installation location.

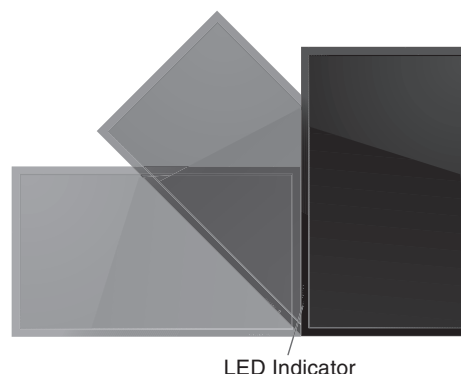
Please note the following when mounting on wall or ceiling

- When using mounting accessories other than those that are NEC approved, they must comply with the VESA-compatible (FDMLv1) mounting method.
- NEC strongly recommends using size M8 screws (10- 18 mm + thickness of bracket and washer in length). If using screws longer than 10- 18 mm, check the depth of the hole. (Recommended Fasten Force: 1125 - 1375N•cm) NEC recommends mounting interfaces that comply with UL1678 standard in North America.
- Prior to mounting, inspect the installation location to insure that it is strong enough to support the weight of the unit so that the unit will be safe from harm.
- Refer to the instructions included with the mounting equipment for detailed information.



Orientation

- When using the display in the portrait position, the monitor should be rotated clockwise so that the left side is moved to the top and the LED indicator light is on the bottom. This will allow for proper ventilation and will extend the lifetime of the monitor. Improper ventilation may shorten the lifetime of the monitor.



Mounting location

- The ceiling and wall must be strong enough to support the monitor and mounting accessories.
- DO NOT install in locations where a door or gate can hit the unit.
- DO NOT install in areas where the unit will be subjected to strong vibrations and dust.
- DO NOT install near where the main power supply enters the building.
- Do not install in where people can easily grab and hang onto the unit or the mounting apparatus.
- When mounting in a recessed area, as in a wall, leave at least 4 inches (10cm) of space between the monitor and the wall for proper ventilation.
- Allow adequate ventilation or provide air conditioning around the monitor, so that heat can properly dissipate away from the unit and mounting apparatus.

Mounting on ceiling

- Ensure that the ceiling is sturdy enough to support the weight of the unit and the mounting apparatus over time, against earthquakes, unexpected vibrations, and other external forces.
- Be sure the unit is mounted to a solid structure within the ceiling, such as a support beam. Secure the monitor using bolts, spring lock washers, washer and nut.
- DO NOT mount to areas that have no supporting internal structure. DO NOT use wood screws or anchor screws for mounting. DO NOT mount the unit to trim or to hanging fixtures.

Maintenance

- Periodically check for loose screws, gaps, distortions, or other problems that may occur with the mounting apparatus. If a problem is detected, please refer to qualified personnel for service.
- Regularly check the mounting location for signs of damage or weakness that may occur over time.

Attaching Mounting Accessories

The display is designed for use with the VESA mounting system.

In order to aid in mounting, a lifting device must be used in conjunction with the attachable eyebolts.

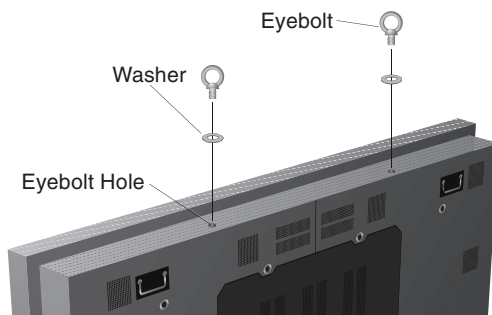
1. Attach eyebolts for mounting

This model is equipped with attachable eyebolts to aid in mounting.

- Place the washer over the threads of the eyebolt.
- Screw the eyebolts into eyebolt holes as shown in the picture.
- Be sure eyebolts are secure.
- In order to move the monitor into position, use a lifting device attached to the eyebolts.

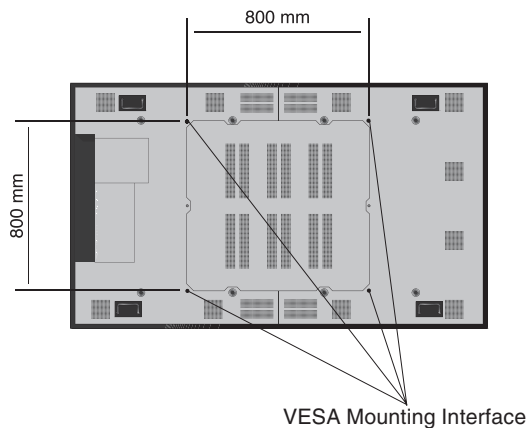
DO NOT mount the monitor using only the eyebolts.

Use an approved mounting accessory.



2. Attach Mounting Accessories

Be careful to avoid tipping monitor when attaching accessories. After accessories are attached, stand can be removed.



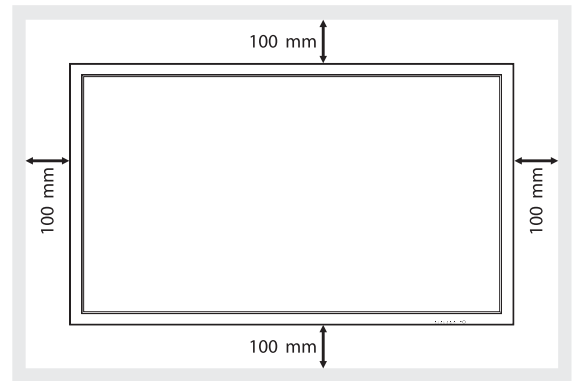
Mounting accessories can be attached with the monitor in the face down position. To avoid damaging the screen face, place the protective sheet on the table underneath the LCD. The protective sheet was wrapped around the LCD in the original packaging. Make sure there is nothing on the table that can damage the monitor.

When using mounting accessories other than NEC compliant and approved, they must comply with the VESA-compatible mounting method. NEC strongly recommends using screws M8 size and 10 - 18 mm in length. If using screws longer than 18 mm, check the depth of the hole. (Recommended Fasten Force: 1125-1375N•cm)

NEC recommends using a mounting interface that complies with UL1678 standard in North America.

3. Ventilation Requirements

When mounting in an enclosed space or recessed area, leave adequate room between the monitor and the enclosure to allow heat to disperse, as shown below.



4. Attach Mounting Accessories

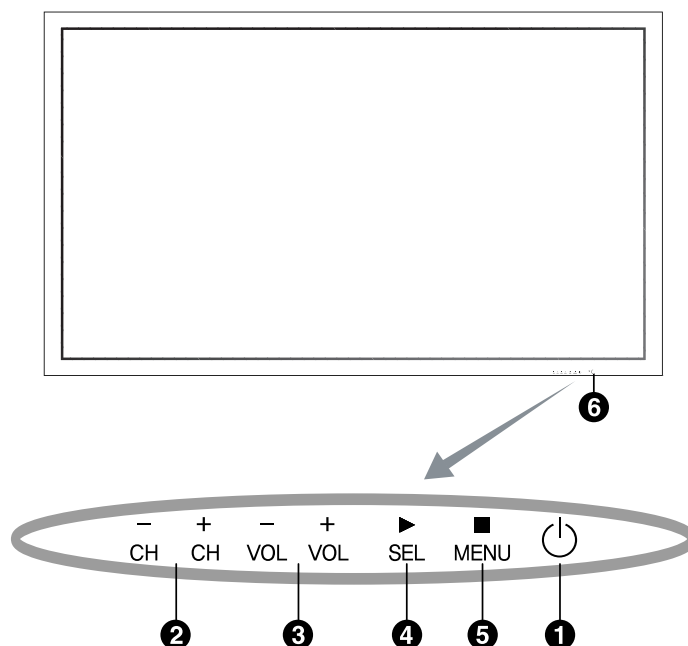
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NEC recommends using a mounting interface that complies with UL1678 standard in North America.

Parts Name and Functions

Control Panel



❶ POWER button (⏻)

Switches the power on/off.

❷ CH +/- button

Acts as ▲ ▼ button to move the highlighted area up or down to select adjustment items within OSD menu.

❸ VOL +/- button

Increases or decreases audio output level.
Increases or decreases the adjustment level within OSD menu settings.

❹ SEL button

Enter Input Source OSD menu, [DVI], [PC], [HDMI], [AV1], [AV2], [S-Video] and [Component].

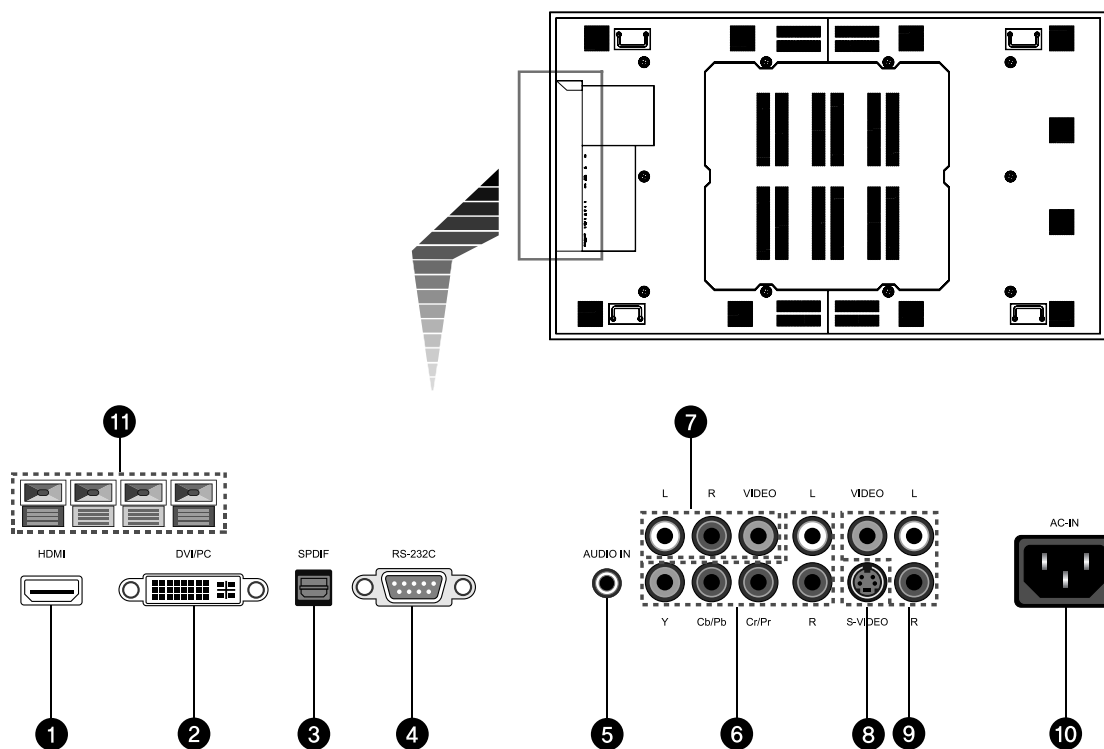
❺ MENU button

Activates the OSD menu when the OSD menu is turned-off.
Move to previous OSD menu.

❻ Remote control sensor and Power Indicator

Receives the signal from the remote control (when using the wireless remote control). See also page 9.
Glows green when the LCD monitor is in active mode.
Glows red when the LCD is in POWER OFF (standby) mode.

Terminal Panel



① HDMI connector

To input digital HDMI signals.

② DVI IN (DVI-I)

To input digital or analogue RGB signals from a computer.

③ SPDIF

Optical digital audio out for HDMI input only.

④ EXTERNAL CONTROL (D-Sub 9 pin)

Connect RS-232C input from external equipment such as a PC in order to control RS-232C functions.

⑤ Audio Input (for DVI-I connector)

To input audio signal from computer.

⑥ Component (RCA)

Connecting equipment such as a DVD player, HDTV device or Set-Top-Box.

⑦ AV1

AV1: For composite video signal.

Audio L, R: To input audio signal from external equipment such as a VCR or DVD player.

⑧ S-Video

S-Video: To input the S-video (Y/C separate signal). Audio input connects to AV2's Audio L/R.

⑨ AV2

AV2: For composite video signal.

Audio L, R: To input audio signal from external equipment such as a VCR or DVD player.

⑩ AC IN connector

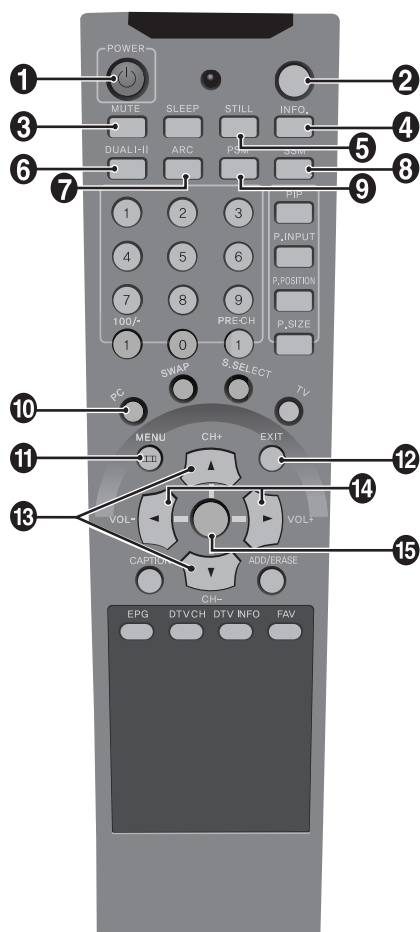
Connects with the supplied power cord.

⑪ EXTERNAL SPEAKER TERMINAL

To output the audio signal from ①, ⑤, ⑥, ⑦, ⑨.

Note: This speaker terminal is for 7W + 7W (8 ohm) speakers.

Wireless Remote Control



NOTE: The button without explanation doesn't work.

❶ POWER button

Switches the power on/off.

❷ SOURCE button

Enter Input Source OSD menu, [DVI], [PC], [HDMI], [AV1], [AV2], [S-Video] and [Component].

❸ MUTE button

Turns on/off mute function.

❹ INFO button

Turns on/off the information OSD.

❺ STILL button

Toggles picture status between motion and still image.

❻ DUAL I II button

Select MTS.

❼ ARC button

Select picture size, [4:3], [16:9], [1:1] for DVI/PC, [16:9], [Panorama], [Zoom1], [Zoom2], [4:3], [14:9], [1:1] for AV1/AV2/S-Video/Component.

❽ SSM button

Select sound Mode, [User], [Standard], [Music], [Movie] and [Speech].

❾ PSM button

Select Picture Mode, [User], [Dynamic], [Standard], [Movies] and [Mild].

❿ PC button

Selects input source of DVI connector.

⓫ MENU button

Turns on the menu mode.

⓬ EXIT button

Turns off the menu mode.

⓭ CH +/- button

Acts as ▲ ▼ button to move the highlighted area up or down to select adjustment items within OSD menu.

⓮ VOL +/- button

Increases or decreases audio output level.
Increases or decreases the adjustment level within OSD menu settings.

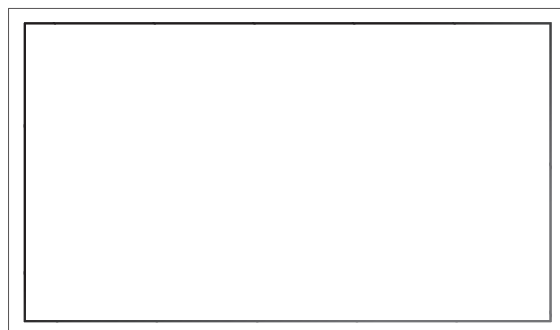
⓯ ENTER button

Makes selection.

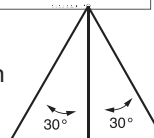
Operating Range for the Remote Control

Point the top of the remote control toward the LCD monitor's remote sensor during button operation.

Use the remote control within a distance of about 7 m (23 ft.) from the front of the LCD monitor's remote control sensor or at a horizontal and vertical angle of within 30° within a distance of about 3.5 m (10 ft.)



Caution: Important, the remote control system may not function when direct sunlight or strong illumination strikes the remote control sensor of the LCD monitor, or when there is an object in the path.



Handling the remote control

- Do not subject to strong shock.
- Do not allow water or other liquid to splash the remote control. If the remote control gets wet, wipe it dry immediately.
- Avoid exposure to heat and steam.
- Other than to install the batteries, do not open the remote control.

Setup

1. Determine the installation location

CAUTION: Installing your LCD display must be done by a qualified technician. Contact your dealer for more information.

CAUTION: IN ORDER TO AID IN MOUNTING, A LIFTING DEVICE MUST BE USED IN CONJUNCTION WITH THE ATTACHABLE EYEBOLTS. MOVING OR INSTALLING THE LCD MONITOR MUST BE DONE BY FOUR OR MORE PEOPLE. Failure to follow this caution may result in injury if the LCD monitor falls.

CAUTION: Do not mount or operate the display upside down, face up, or face down.

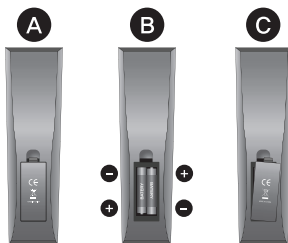
CAUTION: This LCD has a temperature sensor and cooling fan. If the LCD becomes too hot, the cooling fan will turn on automatically. If the LCD becomes overheated while the cooling fan is running, a "Caution" warning will appear. If the "Caution" warning appears, discontinue use and allow the unit to cool. Using the cooling fan will reduce the likelihood of early circuit failure and may help reduce image degradation and "Image Persistence".

If the LCD is used in an enclosed area or if the LCD panel is covered with a protective screen, please check the inside temperature of the monitor by using the "HEAT CONTROL" control in the OSD (see page 20). If the temperature is higher than the normal operating temperature, please turn the FAN CONTROL to ON within the HEAT CONTROL menu within the OSD (see page 20).

IMPORTANT: Lay the protective sheet, which was wrapped around the LCD monitor when it was packaged, beneath the LCD monitor so as not to scratch the panel.

2. Install the remote control batteries

The remote control is powered by two 1.5V AAA batteries. To install or replace batteries:



- Press and slide to open the cover.
- Align the batteries according to the (+) and (-) indications inside the case.
- Replace the cover.

CAUTION: Incorrect usage of batteries can result in leaks or bursting.

NEC recommends the following battery use:

- Place "AAA" size batteries matching the (+) and (-) signs on each battery to the (+) and (-) signs of the battery compartment.
- Do not mix battery brands.
- Do not combine new and old batteries. This can shorten battery life or cause liquid leakage of batteries.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- Do not touch exposed battery acid, it may injure skin.

NOTE: If you do not intend to use the Remote Control for a long period of time, remove the batteries.

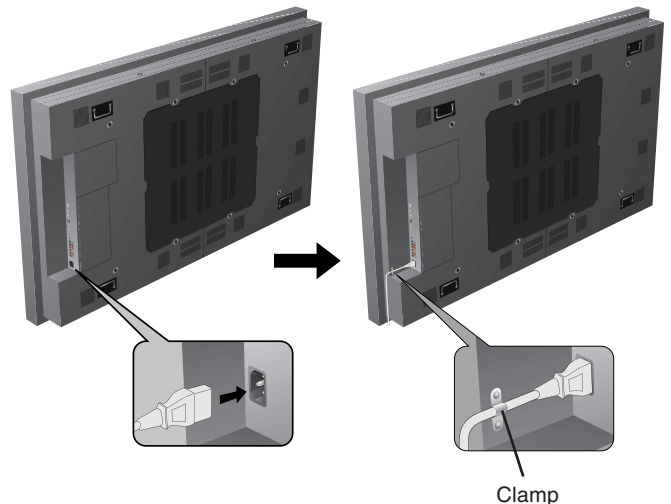
3. Connect external equipment (See pages 12-14)

- To protect the external equipment; turn off the main power before making connections.
- Refer to your equipment user manual for further information.

4. Connect the supplied power cord

- The equipment should be installed close to an easily accessible power outlet.
- Please fasten power cord to the LCD monitor by attaching the screw and clamp.
- Fully insert the prongs into the power outlet socket. A loose connection may cause image degradation.

NOTE: Please refer to the "Safety Precautions and Maintenance" section of this manual for proper selection of AC power cord.



5. Switch on the power of all the attached external equipment

When connected with a computer, switch on the power of the computer first.

6. Operate the attached external equipment

Display the signal from the desired input source.

7. Adjust the sound

Make volume adjustments when required.

8. Adjust the screen (See page 18)

Make adjustments of the screen display position when necessary.

9. Adjust the image (See page 18)

Make adjustments such as brightness or contrast when required.

10. Recommended Adjustments

To reduce the risk of the "Image Persistence", please adjust the following item based on the application being used: "SCREEN SAVER" (See page 19). It is recommended that the "FAN CONTROL" setting (See page 20) be turned to ON also.

Connections

Before making connections:

- * First turn off the power of all the attached equipment and make connections.
- * Refer to the user manual included with each separate piece of equipment.

Connecting a Personal Computer

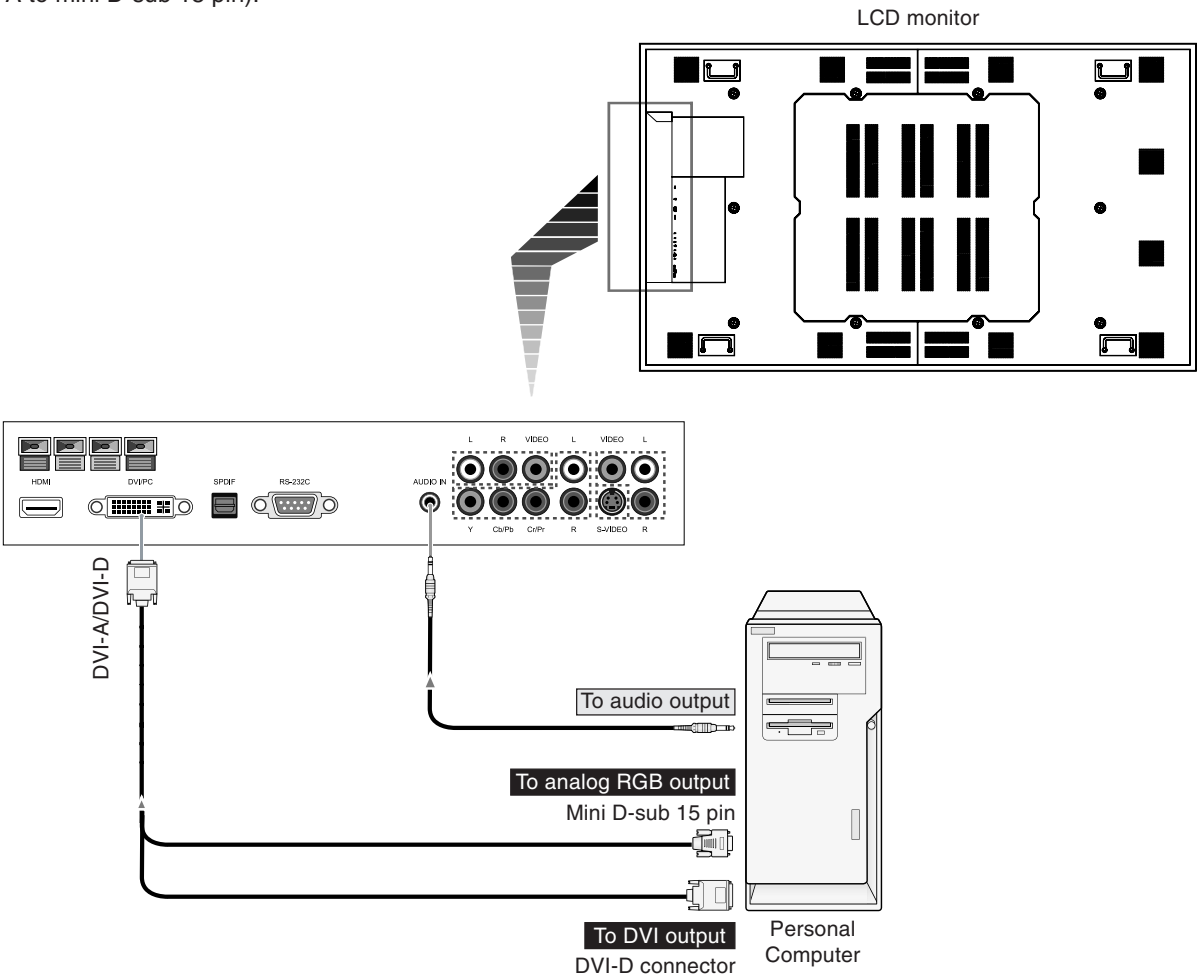
Connecting your computer to your LCD monitor will enable you to display your computer's screen image. Some video cards and a pixel clock over 162MHz may not display an image correctly. Your LCD monitor displays proper image by adjusting the factory preset timing signal automatically.

<Factory preset signal timing>

Resolution	Scanning frequency		Remarks
	Horizontal	Vertical	
640 x 480	31.5kHz	60Hz	
800 x 600	37.9kHz	60Hz	
1024 x 768	48.4kHz	60Hz	
1280 x 768	48kHz	60Hz	
1360 x 768	48kHz	60Hz	
1280 x 1024	64kHz	60Hz	
1600 x 1200	75kHz	60Hz	Compressed image
1920 x 1080	66.6kHz	60Hz	Recommended resolution

Connect the LCD Monitor to a Personal Computer

- To connect the DVI IN connector on the LCD monitor, use the supplied PC - Video RGB signal cable (DVI-D to DVI-D, DVI-A to mini D-sub 15 pin).



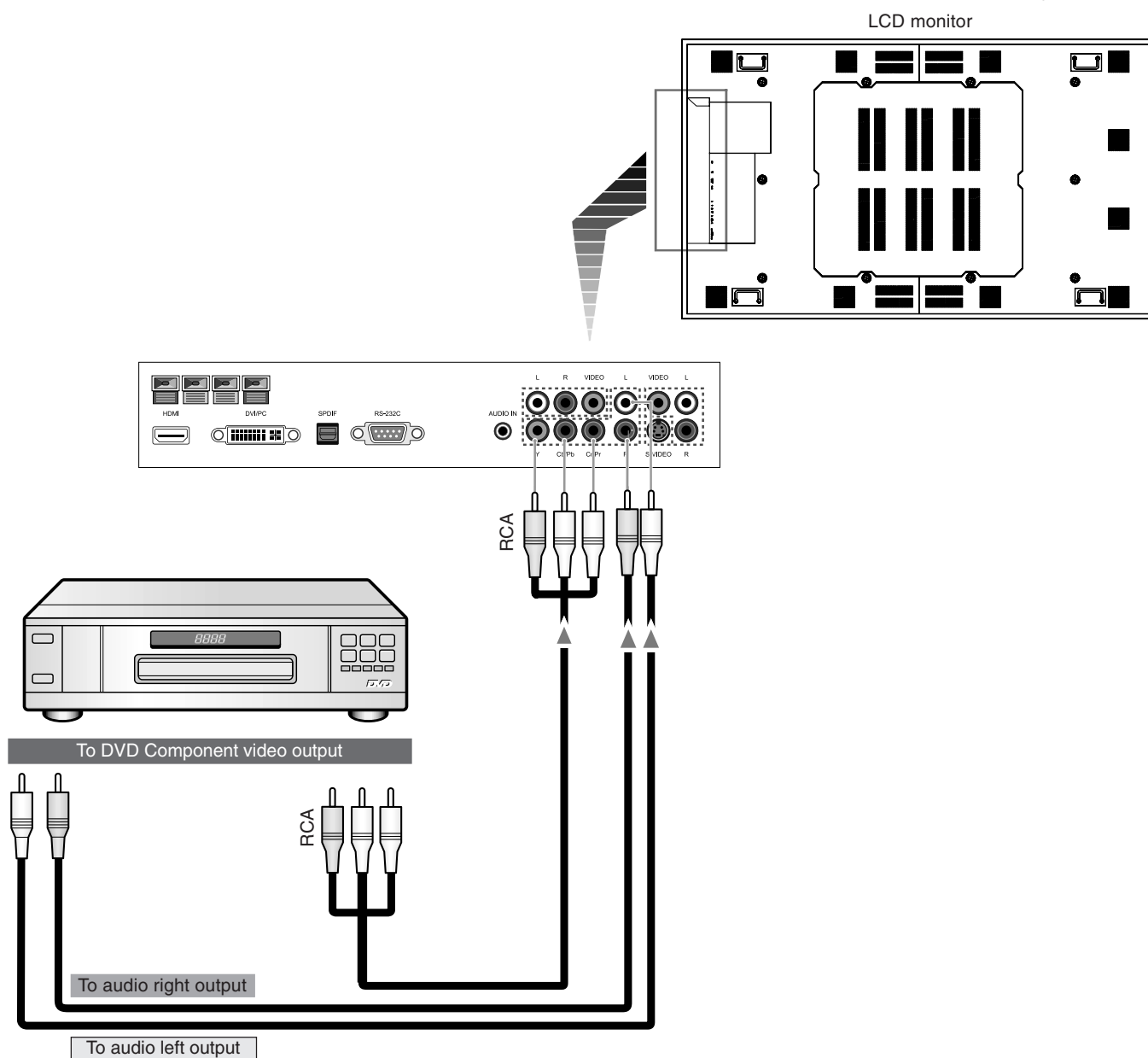
Connecting a DVD Player with component out

Connecting your DVD player to your LCD monitor will enable you to display DVD video.

Refer to your DVD player user's manual for more information.

Connect the LCD Monitor to a DVD Player

- To connect the Component connector (RCA) on the LCD monitor, use an RCA connector cable (sold separately).



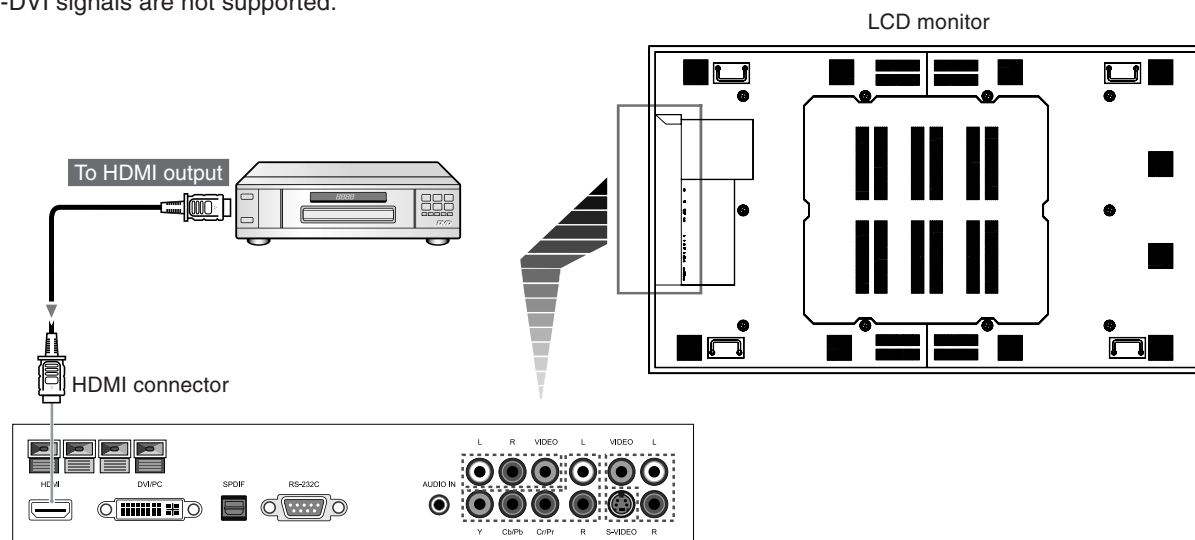
Connecting a DVD Player with HDMI out

Connecting your DVD player to your LCD monitor will enable you to display DVD video.

Refer to your DVD player user's manual for more information.

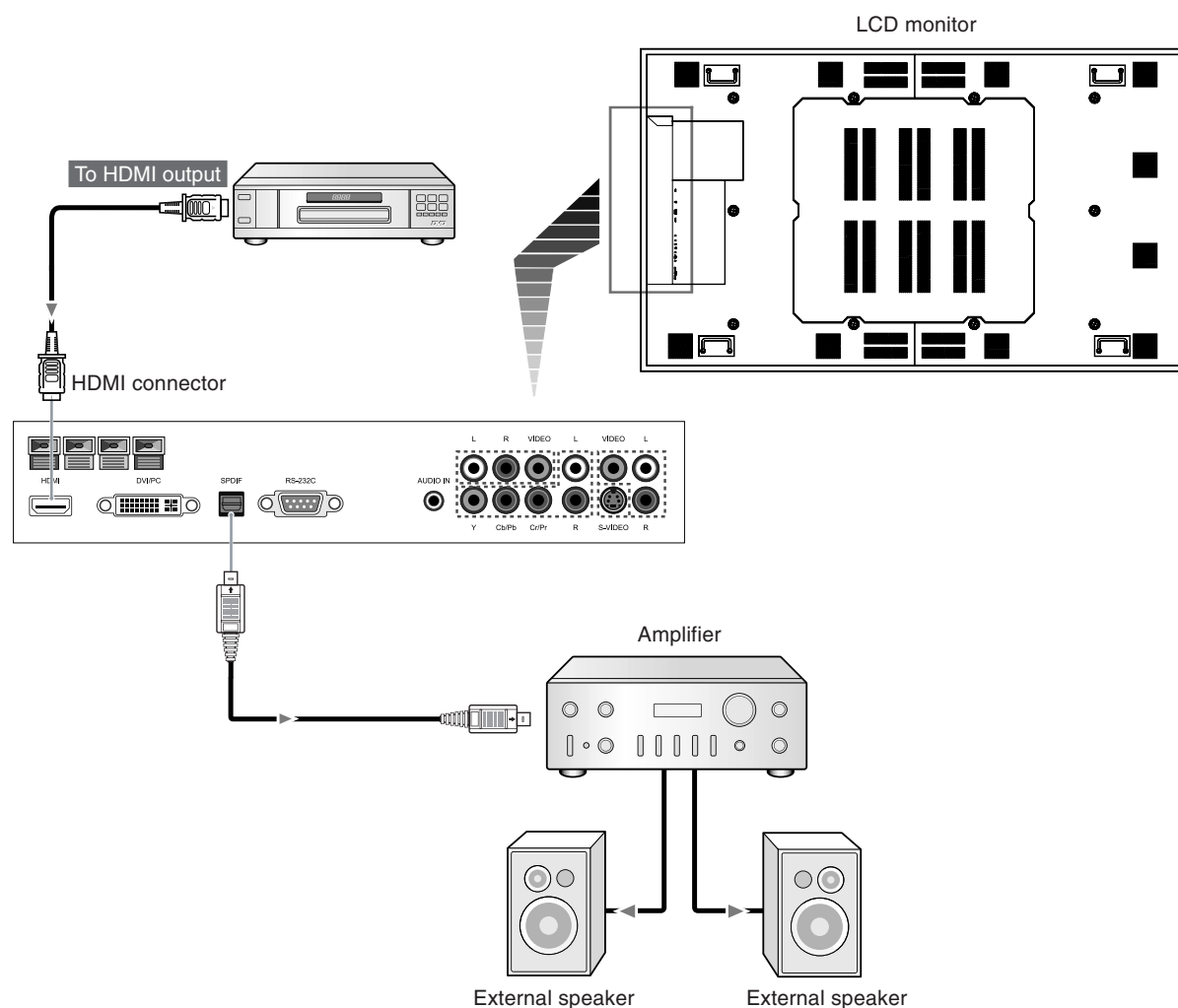
Connect the LCD Monitor to a DVD Player

- Please use an HDMI cable with HDMI logo.
- It may take a moment for the signal to appear.
- PC-DVI signals are not supported.



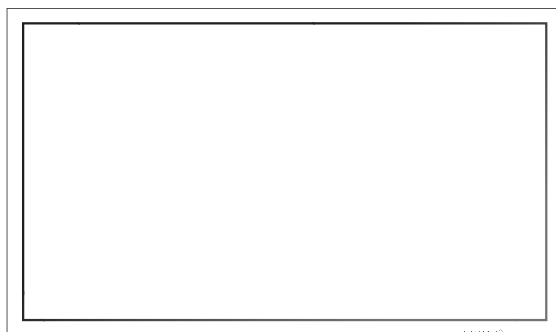
Connecting to a Stereo Amplifier

You can connect your stereo amplifier to your LCD monitor. Refer to your amplifier owner's manual for more information.

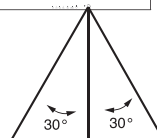
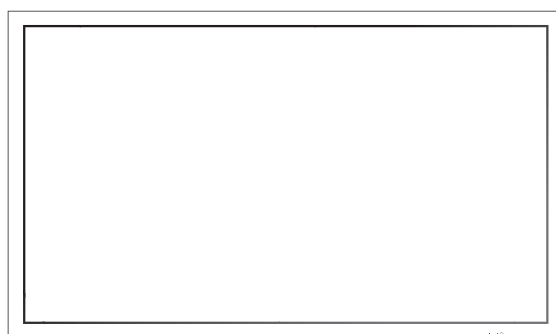


Power ON and OFF Modes

The LCD monitor power indicator will turn green while powered on and will turn red while powered off.



Power Button



Power Indicator

Mode	Status Indicator Light
Power ON	Green
Power OFF (Standby)* Power consumption under 1W	Red
Power Save Power consumption under 15W	Red blinking
Not connected	Green blinking

* When in Power OFF (Standby) mode, RS-232C control do not function.

Using Power Management

The LCD monitor follows the VESA approved DPM Power Management function.

The power management function is an energy saving function that automatically reduces the power consumption of the display when the keyboard or the mouse has not been used for a fixed period.

The power management feature on your new display has been set to the “ON” mode. This allows your display to enter a Power Saving Mode when no signal is applied. This could potentially increase the life and decrease the power consumption of the display.


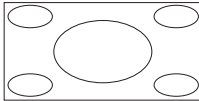
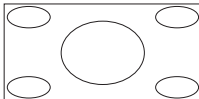
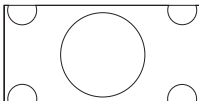
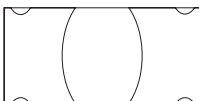
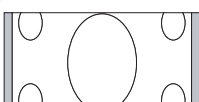
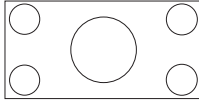


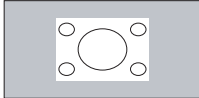
Picture Size

DVI, PC

$$16:9 \rightarrow 1:1 \rightarrow 4:3$$

HDMI, AV1, AV2, S-Video, Component

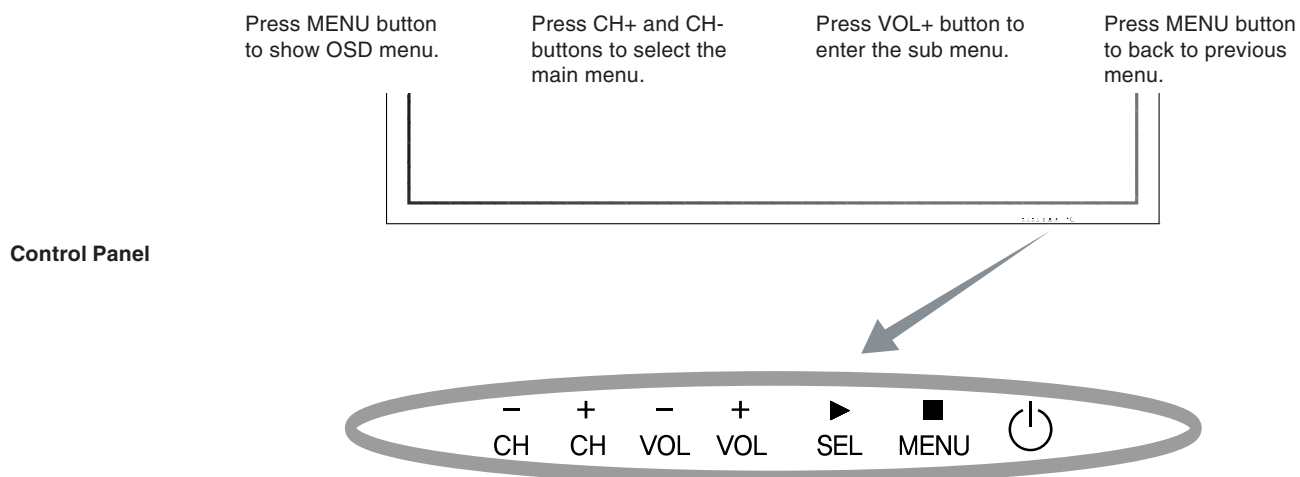
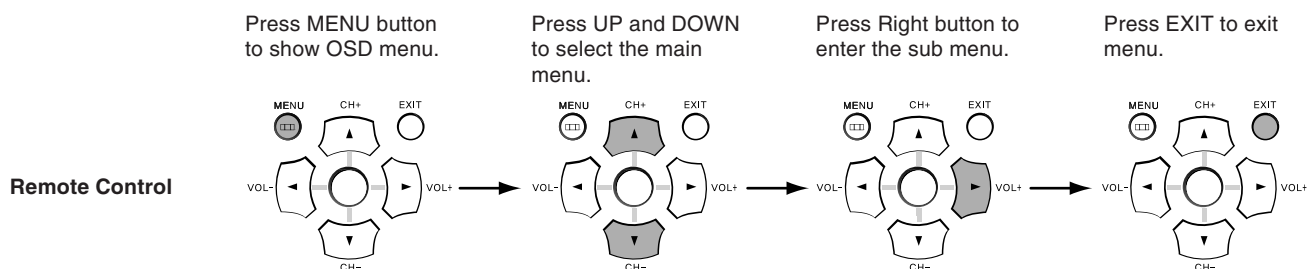
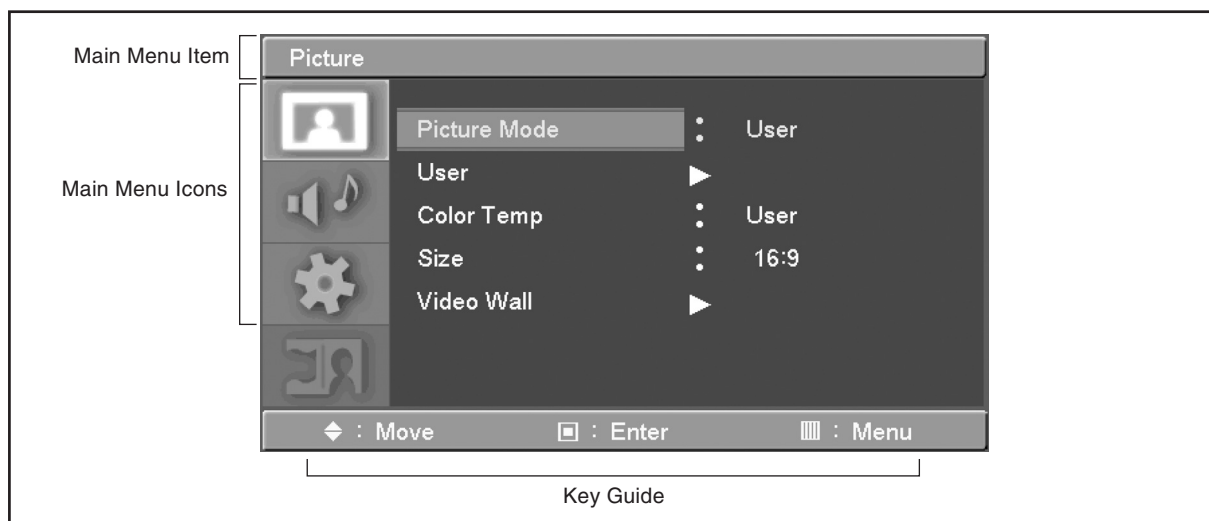
16:9 → Panorama → Zoom1 → Zoom2 → 4:3 → 14:9

Aspect ratio of image	Unchanged view*1	Picture size example*1
4:3		16:9 
		Panorama 
		Zoom1 
		Zoom2 
		14:9 
16:9		4:3 
4:3 (1024 x 768 input)		1:1 

*1 Grey areas indicate unused portions of the screen.

OSD (On-Screen-Display) Controls

NOTE: Some functions may not be available depending on the model or optional equipment.



Picture	Picture Mode		
	User	Store last value at User setting.	
	Dynamic	Selection of the picture appearance.	
	Standard		
	Movie		
	Mild		
	User		
	Brightness	Adjust the brightness.	
	Contrast	Adjust the Contrast.	
	Color (AV1/AV2/S-Video/Component)	Adjust the Color.	
	Tint (AV1/AV2/S-Video/Component)	Adjust the Tint.	
	Sharpness	Adjust the Sharpness.	
	Phase (Component)	Adjust the Phase	
	Color Temp		
	User (PC, DVI, HDMI)	This Function is for user setting of color Temp.	
	Cool 2	This Function is for selection of preset Color value.	
	Cool 1		
	Normal		
	Warm 1		
	Warm 2		
	Size		
	16:9	Select Screen Format	
	Panorama (HDMI/AV1/AV2/S-Video/Component)		
	Zoom1 (HDMI/AV1/AV2/S-Video/Component)		
	Zoom2 (HDMI/AV1/AV2/S-Video/Component)		
	4:3		
	14:9 (HDMI/AV1/AV2/S-Video/Component)		
	1:1 (DVI/PC)		
	PC (PC only)		
	Auto in progress	Automatically Tuning.	
	Phase	Adjust the Phase Value by Manual.	
	H-Position	Adjust the H-Position Value by Manual.	
	V-Position	Adjust the V-Position Value by Manual.	
	Frequency	Adjust the Frequency Value by Manual.	
	Video Wall		
	Set X	This function is for Video Wall Settings Each function fix the ID of Position & Wall format	
	Set Y		
	Set X Max		
	Set Y Max		
	Set X Gap		
	Set Y Gap		

Sound	Mode		
	User	This function use setting Equalizer value.	
	Standard	Selection of preset Sound mode (Equalizer).	
	Music		
	Movie		
	Speech		
	Volume		Adjust the sound volume level.
	Balance		Tuning the sound balance between left and right.
	Equalizer		
	10 KHz	The value of 5 Band equalizer are preset.	
	3 KHz	These values are changed by user with user mode setting.	
	1 KHz		
	300 Hz		
	100 Hz		
	AVC		
	On /Off	Automatic volume level control	
	MTS		
	Stereo (L+R)	MTS feature is selecting one (L or R) or both (L+R) channel of sound input generating bilingual stereo sound output.	
Dual 1 (L)			
Dual 2 (R)			

Setup	Reset		Reset as default setting
	Time		
	Clock	Time setting by up and down buttons.	
	On Timer	Setting power on time.	
	Off Timer	Setting power off time.	
	Language		This function is use to select preset language.
	English		
	Spanish		
	Português		
	German		
	French		
	OSD Tone		
	Off/On	Disable blending OSD background with video image.	
	Screen Saver		
	Moving dot	Enables screen saver function to avoid panel burning.	
	BG Gray		

Advanced		
	Dimming	
	Auto Dimming	Enable/Disalbe Auto Dimming control by Abient Light sensor.
	Dim Level	Display current Dim Level.
	MAX Dim Ambient	Adjusts detected light ambient to set the maximun dimming.
	MIN Dim Ambient	Adjusts detected light ambient to set the minimun dimming.
	Ambient	Display current detected light ambient level by Lux unit.
	Heat Control	
	Fan Control	Controls fan driving option by temperature sensor / force on/ force off.
	Fan Active Temperature	Adjusts fan driving temperature by celsius degree. It works only when the fan control setting is auto.
	Hysteresis	Adjusts fan driving hystereis temperature by celsius degree.
	Main	Display the current temperature of Main board and Aux Temperature sensor.
	AUX	
	Video Signals	
	13xx Mode	
	Auto	Select 13xx series native PC video timings.
	1024 x 768	
	1280 x 768	
	1360 x 768	
	1366 x 768	

Controlling the LCD monitor via RS-232C Remote Control

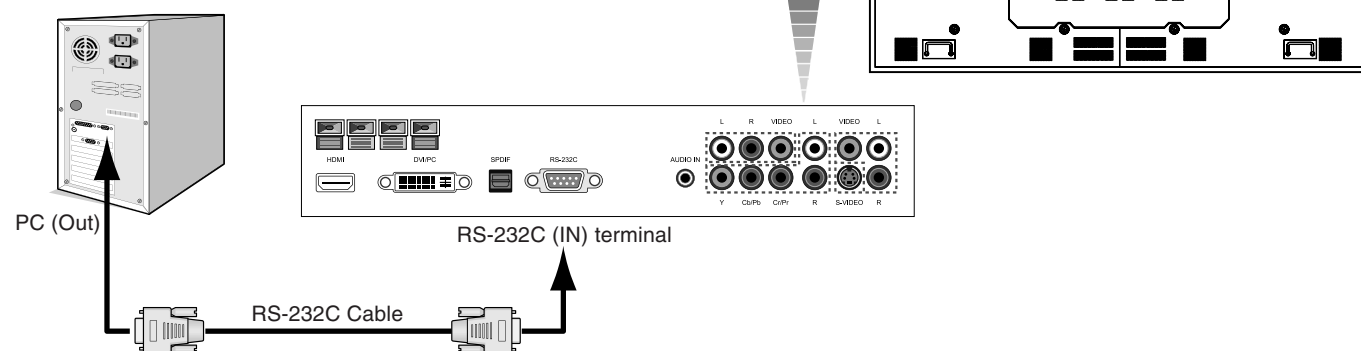
This LCD monitor can be controlled by connecting a personal computer with a RS-232C terminal.

Functions that can be controlled by a personal computer are:

- Power ON or OFF
- Switching between input signals

Connection

LCD Monitor + PC



NOTE: If your PC (IBM or IBM compatible) is equipped only with a 25-pin serial port connector, a 25-pin serial port adapter is required. Contact your dealer for details.

* In order to function, the RS-232C OUT terminal can only be connected to another monitor of the same model. Do not connect to other types of equipment.

To control monitor or multiple monitors that are daisy-chained together please use the control command. Instructions for the control command can be found on the CD included with the display. The file is called "External_control_LCD8205.pdf".

1) Interface

PROTOCOL	RS-232C
BAUD RATE	9600 [bps]
DATA LENGTH	8 [bits]
PARITY BIT	NONE
STOP BIT	1 [bit]
FLOW CONTROL	NONE

This LCD monitor uses RXD, TXD and GND lines for RS-232C control.

2) Control command diagram

Please see file "External_Control_LCD8205.pdf" on the CD-ROM.

Features

Color Control Systems: Allows you to adjust the colors on your screen and customize the color accuracy of your monitor to a variety of standards.

OSD (On-Screen-Display) Controls: Allow you to quickly and easily adjust all elements of your screen image via simple to use on-screen menus.

Plug and Play: The Microsoft® solution with the Windows® operating system facilitates setup and installation by allowing the monitor to send its capabilities (such as screen size and resolutions supported) directly to your computer, automatically optimizing display performance.

IPM (Intelligent Power Manager) System: Provides innovative power-saving methods that allow the monitor to shift to a lower power consumption level when on but not in use, saving two-thirds of your monitor energy costs, reducing emissions and lowering the air conditioning costs of the workplace.

FullScan Capability: Allows you to use the entire screen area in most resolutions, significantly expanding image size.

VESA Standard (FDMLv1) Mounting Interface: Allows users to connect their LCD monitor to any VESA standard (FDMLv1) third party mounting arm or bracket. Allows for the monitor to be mounted on a wall or an arm using any third party compliant device. NEC recommends using mounting interface that comply with TÜV-GS and/or UL1678 standard in North America.

DVI-D: The digital-only subset of DVI ratified by the Digital Display Working Group (DDWG) for digital connections between computers and displays. As a digital-only connector, analog support is not provided for a DVI-D connector. As a DVI-based digital only connection, only a simple adapter is necessary for compatibility between DVI-D and other DVI-based digital connectors such as DFP and P&D. The DVI interface of this display supports HDCP.

Video Wall: Shows one image over multiple screens with accuracy while compensating for bezel width.

Troubleshooting

No picture

- The signal cable should be completely connected to the display card/computer.
- The display card should be completely seated in its slot.
- Front Power Switch and computer power switch should be in the ON position.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)
- Check the monitor and your display card with respect to compatibility and recommended settings.
- Check the signal cable connector for bent or pushed-in pins.

Power Button does not respond

- Unplug the power cord of the monitor from the AC outlet to turn off and reset the monitor.

Image persistence

- Please be aware that LCD Technology may experience a phenomenon known as Image Persistence. Image Persistence occurs when a residual or "ghost" image of a previous image remains visible on the screen. Unlike CRT monitors, LCD monitors' image persistence is not permanent, but constant images being displayed for a long period of time should be avoided. To alleviate image persistence, turn off the monitor for as long as the previous image was displayed. For example, if an image was on the monitor for one hour and a residual image remains, the monitor should be turned off for one hour to erase the image.

NOTE: As with all personal display devices, NEC DISPLAY SOLUTIONS recommends displaying moving images and using a moving screen saver at regular intervals whenever the screen is idle or turning off the monitor when not in use.

Image is unstable, unfocused or swimming is apparent

- Signal cable should be completely attached to the computer.
- Use the OSD Image Adjust controls to focus and adjust display by increasing or decreasing the fine adjustment. When the display mode is changed, the OSD Image Adjust settings may need to be re-adjusted.
- Check the monitor and your display card with respect to compatibility and recommended signal timings.
- If your text is garbled, change the video mode to non-interlace and use 60Hz refresh rate.

Image of component signal is greenish

- Check to see if the DVD/HD input connector is selected.

LED on monitor is not lit

(no green or red color can be seen)

- Power Switch should be in the ON position and power cord should be connected.
- Make certain the computer is not in a power-saving mode (touch the keyboard or mouse).

Display image is not sized properly

- Use the OSD Image Adjust controls to increase or decrease the coarse adjustment.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)

Selected resolution is not displayed properly

- Use OSD Display Mode to enter Information menu and confirm that the appropriate resolution has been selected. If not, select corresponding option.

No Sound

- Check to see if speaker cable is properly connected.
- Check to see if mute is activated.
- Check to see if volume is set at minimum.

Remote Control is not available

- Check the Remote Control's batteries status.
- Check if batteries are inserted correctly.
- Check if the Remote Control is pointing at the monitor's remote sensor.
- The remote control system may not function when direct sunlight or strong illumination strikes the remote control sensor of the LCD monitor, or when there is an object in the path.

RS-232C does not work

- Make sure the monitor is not in "Power OFF (Standby)" mode (LED is in Red). See page 16.

Either light vertical or horizontal stripes may appear, depending on the specific display pattern. This is no product fault or degradation.

Specifications

Product Specifications

LCD Module			81.6"/207 cm diagonal
	Pixel Pitch:		0.744 mm
	Resolution:		1920 x 1080 dots
	Color:		Over 16 million colors (depending on video card used)
	Brightness:		600 cd/m ² (Typ.) (LCD8205)/450 cd/m ² (Typ.) (LCD8205-P)
	Contrast Ratio:		2000:1
	Viewing Angle:		89° (typ) @ CR>10 (LCD8205)/85° (typ) @ CR>10 (LCD8205-P)
	Design View Distance:		1500 mm
Frequency		Horizontal:	15.625/15.734 kHz, 31.5 kHz - 91.1 kHz (Analog Input)
		Vertical:	31.5 kHz - 91.1 kHz (Digital Input)
			50.0 - 85.0 Hz
Pixel Clock			25.2 MHz - 162.0 MHz
Viewable Size			1428.48 x 803.52 mm
Input Signal			
DVI	DVI-I	Digital RGB	DVI (HDCP) VGA60, SVGA60, XGA60, WXGA60, SXGA60, UXGA60*, 1920X1080 (60Hz)
PC	DVI-I	Analog RGB	0.7 Vp-p, Input Impedance 75 ohm VGA60, SVGA60, XGA60, WXGA60, SXGA60, UXGA60*, 1920X1080 (60Hz)
		Sync	Separate: TTL level (Pos./Neg.) Composite sync on Green Video: 0.3 Vp-p Neg.
HDMI	HDMI Connector	Digital RGB	HDMI 1080p, 1080i, 720p@50Hz/60Hz, 576p@50Hz, 480p@60Hz
AV1/AV2	RCA	Composite	1.0 Vp-p Input Impedance 75 ohm NTSC/PAL/SECAM/4.43NTSC/PAL60
S-VIDEO	Mini DIN 4pin	S-VIDEO	Y: 1.0 Vp-p/75 ohm C: 0.286 Vp-p/75 ohm (NTSC), 0.3 Vp-p/75 ohm (PAL/SECAM) NTSC/PAL/SECAM/4.43NTSC/PAL60
COMPONENT	RCA (Y, Cb/Pb, Cr/Pr)	Component	Y: 1.0 Vp-p/75ohm, Cb/Cr (Pb/Pr): 0.7 Vp-p/75 ohm HDTV/DVD: 1080p, 1080i, 720p@50Hz/60Hz, 576p@50Hz, 480p@60Hz, 576i@50Hz, 480i@60Hz
AUDIO			
AUDIO Input	STEREO Mini Jack	Analog Audio	Stereo L/R 0.5 Vrms
	RCA(L/R) x3		
	HDMI Connector	Digital Audio	PCM 32, 44.1, 48 KHz (16/20/24bit)
AUDIO Output	SPDIF Connector	Digital Audio	PCM 32, 44.1, 48 KHz (16/20/24bit)
Speaker Output			External Speaker Jack 7 W + 7 W (8 ohm)
Control		RS-232C In:	9 Pin D-sub
Power Supply			9.5 - 4.25 A @ 100-240VAC, 50/60Hz
Operational Environment		Temperature:	5 - 40°C (LCD8205)/5 - 35°C (LCD8205-P)
		Humidity:	20 - 80% (without condensation)
		Altitude:	0 - 3000 m
Storage Environment		Temperature:	-20 - 60°C
		Humidity:	10 - 90% (without condensation)/90% - 3.5% x (Temp - 40°C) regarding over 40°C
Dimension		Net:	1926 (W) x 1137 (H) x 150 (D) mm (LCD8205)
			1926 (W) x 1137 (H) x 160 (D) mm (LCD8205-P)
		Gross:	2216 (W) x 1387 (H) x 710 (D) mm (without pallet)
Weight		Net:	132 Kg (LCD8205)/157 Kg (LCD8205-P)
		Gross:	173 Kg (LCD8205)/199 Kg (LCD8205-P)
VESA compatible arm mounting interface			800 mm X 800 mm (4 Holes)
Complied Regulatory and Guidelines			UL60950-1/CSA C22.2 No.60950-1/ TUV/EN60950-1 FCC-A/DOC-A/EN55022-A/EN55024/EN61000-3-2/EN61000-3-3/CE/GOST-R
Power Management			VESA DPM
Plug & Play			VESA DDC2B, DDC/CI
Accessories			User's manual, Power Cord, Video Signal Cable, Remote Control, AAA Battery x 2, Clamp, Screw x 2, CD-ROM, Eyebolt x 2, Washer x 2, Hanger bolt x 8

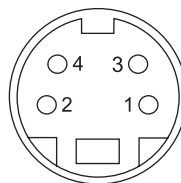
NOTE: Technical specifications are subject to change without notice.

*: Compressed image

Pin Assignment

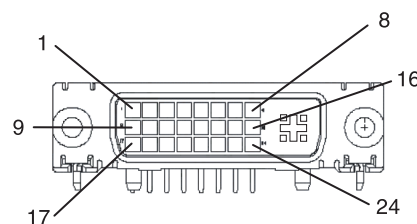
1) S-VIDEO input: VIDEO

Pin No	Name
1	GND
2	GND
3	Y (Luminance)
4	C (Chroma)



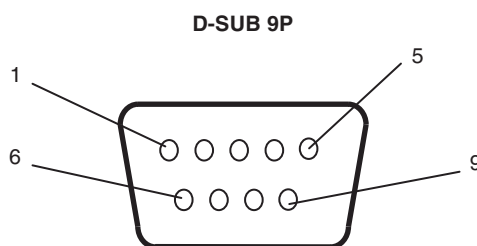
2) Digital/Analog RGB input: DVI-I

Pin - Assignment of DVI connector:					
1	TX2-	9	TX1-	17	TX0-
2	TX2+	10	TX1+	18	TX0+
3	Shield (TX2 / TX4)	11	Shield (TX1 / TX3)	19	Shield (TX0 / TX5)
4	NC	12	NC	20	NC
5	NC	13	NC	21	NC
6	DDC-Serial Clock	14	+5V power	22	Shield (TXC)
7	DDC-Serial Data	15	Ground	23	TXC+
8	NC	16	Hot plug detect	24	TXC-



3) RS-232C input

Pin No	Name
1	connected to 7&8
2	RXD
3	TXD
4	connected to 6
5	GND
6	connected to 4
7	connected to 1&8
8	connected to 1&7
9	NC



This LCD monitor uses RXD, TXD and GND lines for RS-232C control.

Manufacturer's Recycling and Energy Information

NEC DISPLAY SOLUTIONS is strongly committed to environmental protection and sees recycling as one of the company's top priorities in trying to minimize the burden placed on the environment. We are engaged in developing environmentally-friendly products, and always strive to help define and comply with the latest independent standards from agencies such as ISO (International Organisation for Standardization) and TCO (Swedish Trades Union).

Disposing of your old NEC product

The aim of recycling is to gain an environmental benefit by means of re-use, upgrading, reconditioning or reclamation of material. Dedicated recycling sites ensure that environmentally harmful components are properly handled and securely disposed. To ensure the best recycling of our products, **NEC DISPLAY SOLUTIONS offers a variety of recycling procedures** and gives advice on how to handle the product in an environmentally sensitive way, once it has reached the end of its life.

All required information concerning the disposal of the product and country-specific information on recycling facilities can be found on our following websites:

<http://www.nec-display-solutions.com/greencompany/> (in Europe),

<http://www.nec-display.com> (in Japan) or

<http://www.necdisplay.com> (in USA).

Energy Saving

This monitor features an advanced energy saving capability. When a VESA Display Power Management Signalling (DPMS) Standard signal is sent to the monitor, the Energy Saving mode is activated. The monitor enters a single Energy Saving mode.

Mode	Power consumption	LED color
Normal Operation	Approx. 900W	Green
Energy Saving Mode	Less than 15W	Red blinking
Off Mode	Less than 1W	Red

WEEE Mark (European Directive 2002/96/EC)



Within the European Union

EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your NEC display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself and NEC.

The mark on electrical and electronic products only applies to the current European Union Member States.

Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.